

Fujitsu LifeBook

N Series

BIOS Guide

LifeBook N Series Models:

N6110

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F U J I T S U C O M P U T E R S Y S T E M S

N Series BIOS

BIOS SETUP UTILITY

The BIOS Setup Utility is a program that sets up the operating environment for your notebook. Your BIOS is set at the factory for normal operating conditions, therefore there is no need to set or change the BIOS environment to operate your notebook.

The BIOS Setup Utility configures:

- Device control feature parameters, such as changing I/O addresses and boot devices.
- System Data Security feature parameters, such as passwords.

Entering the BIOS Setup Utility

To enter the BIOS Setup Utility do the following:

1. Turn on or restart your notebook.
2. Press the [F2] key once the Fujitsu logo appears on the screen. This will open the main menu of the BIOS Setup Utility with the current settings displayed.
3. Press the arrow keys to scroll through the other setup menus to review or alter the current settings.

Navigating Through The Setup Utility

The BIOS setup utility consists of six menus: Main, Advanced, Security, Boot, Info, and Exit. This document explains each menu in turn, including all submenus and setup items.

The following procedures allow you to navigate the setup utility menus:

1. To select a menu, use the cursor keys: [←], [→].
2. To select a field within a menu or a submenu, use the cursor keys:
[↑], [↓].
3. To select the different values for each field, press the [Spacebar] or [+] to change to the next higher selection and [F5] or [-] to go to the next lower selection.
4. To activate a submenu press the [Enter] key.
5. To return to a menu from a submenu, press the [Esc] key.
6. To go to the Exit menu from any other menu, press the [Esc] key.

- Selecting a field causes a help message about that field to be displayed on the right-hand side of the screen.



- Pressing the Enter key with the highlight on a selection that is not a submenu or auto selection will cause a list of all options for that item to be displayed. Pressing the Enter key again will select the highlighted choice.

7. Pressing the [F9] key resets all items in the BIOS to the default values.
8. Pressing the [F10] key saves the current configuration and exits the BIOS Setup Utility. You will be asked to verify this selection before it is executed.
9. Pressing the [F1] key gives you a general help screen.

Entering the Setup Utility After a Configuration Change or System Failure

If there has been a change in the system configuration that does not agree with the parameter settings stored in your BIOS memory, or there is a failure in the system, the system beeps and/or displays an error message after the Power On Self Test (POST). If the failure is not too severe, it will give you the opportunity to modify the settings of the setup utility, as described in the following steps:

1. When you turn on or restart the computer there is a beep and/or the following message appears on the screen:
Error message - please run SETUP program Press <F1> key to continue, <F2> to run SETUP
2. If an error message is displayed on the screen, and you want to continue with the boot process and start the operating system anyway, press the [F1] key.



- If your notebook emits a series of beeps that sounds like a code and the display is blank, refer to the Troubleshooting section of your system Use's Guide. The Troubleshooting Section includes a list of error messages and their meanings.
- If your data security settings require it, you may be asked for a password before the operating system will be opened.

3. If an error message is displayed on the screen, and you want to enter the setup utility, press the [F2] key.
4. When the setup utility starts with a fault present, the system displays the following message:
Warning!
Error message
[Continue]
5. Press any key to enter the setup utility. The system will then display the Main Menu with current parameters values.

MAIN MENU – SETTING STANDARD SYSTEM PARAMETERS

The Main Menu allows you to set or view the current system parameters. Follow the instructions for Navigating Through The Setup Utility to make any changes. (See *Navigating Through The Setup Utility* on page 2 for more information.)

The following tables show the names of the menu fields for the Main menu and its submenus, all of the options for each field, the default settings and a description of

the field’s function and any special information needed to help understand the field’s use.



System Time and System Date can also be set from your operating system without using the setup utility. Use the calendar and time icon on your Windows Control panel or type time or date from the MS-DOS prompt.

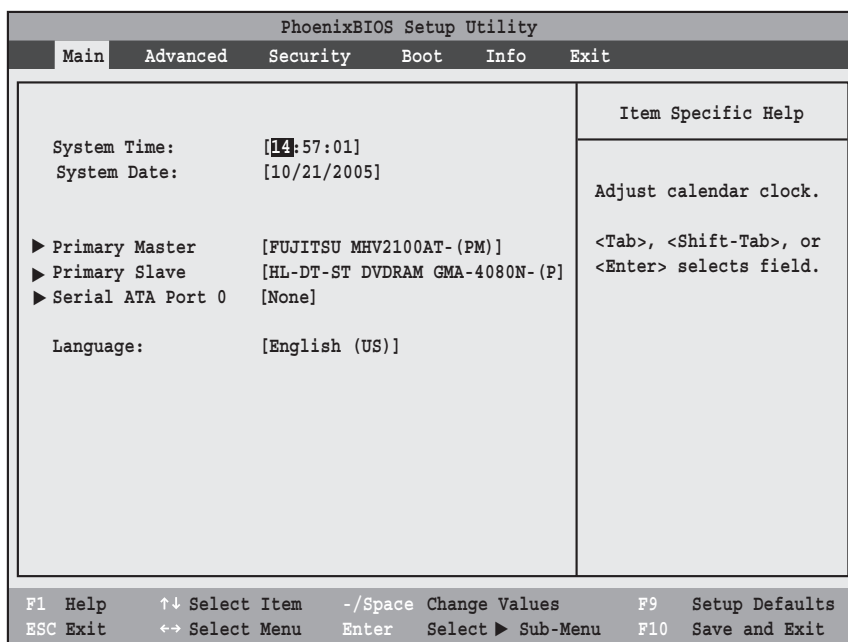


Figure 1. Main Menu

Table 1: Fields, Options and Defaults for the Main Menu

Note that the parameters listed in the following table may vary depending upon your system’s configuration.

Menu Field	Options	Default	Description
System Time:	—	—	Sets and displays the current time. Time is in a 24 hour format of hours:minutes:seconds with 2 digits for each. (HH:MM:SS). Example: 16:45:57. You may change each segment of the time separately. Move between the segments with the [Tab] key and/or [Shift] + [Tab] keys.
System Date:	—	—	Sets and displays the current date. Date is in a month/day/year numeric format with 2 digits each for month and day and 4 digits for year. (MM/DD/YYYY) for example: 03/20/1998. You may change each segment of the date separately. Move between the segments with the [Tab] key and/or [Shift] + [Tab] keys.

Table 1: Fields, Options and Defaults for the Main Menu

Note that the parameters listed in the following table may vary depending upon your system's configuration.

Menu Field	Options	Default	Description
Primary Master:	Selects Primary Master submenu	The product number of the hard drive.	Display the type of device on this ATA/ATAPI interface, if there is one. Pressing the Enter key selects the Primary Master submenu allowing additional device configuration options for this interface.
Primary Slave	Selects Primary Slave submenu	The product number of the CD-ROM drive.	Display the type of device on this ATA/ATAPI interface, if there is one. Pressing the Enter key selects the Primary Slave submenu allowing additional device configuration options for this interface
Serial ATA Port 0	Selects Serial ATA Port 0 submenu	[None]	Display the type of device on this ATA/ATAPI interface, if there is one. Pressing the Enter key selects the Serial ATA Port 0 submenu allowing additional device configuration options for this interface
Language:	<ul style="list-style-type: none"> ▪ English (US) ▪ Japanese (JP) 	[English (US)]	The default setting differs between the US/European and the Japanese model. Selects the display language for the BIOS. (Note that this field may appear blank until the first time it is selected.)

Primary Master Submenu of the Main Menu

The Primary Master submenu identifies what ATA devices are installed.

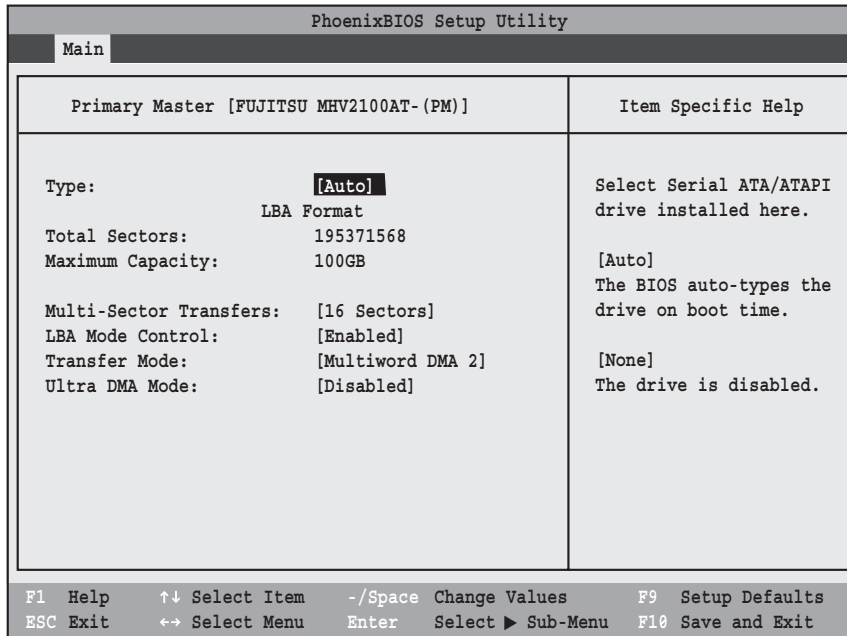


Figure 2. Primary Master Submenu

Table 2: Fields, Options and Defaults for the Primary Master Submenu of the Main Menu

Menu Field	Options	Default	Description
Type:	<ul style="list-style-type: none"> ▪ Auto ▪ None 	[Auto]	Automatically selects the ATA/ATAPI device type. To change the selection, press the spacebar. Select Auto to have the type automatically identified by the BIOS at POST. Select None if you don't want to select a primary master.
LBA Format		Logical Block Addressing (LBA)	
Total Sectors:	---	---	The total number of sectors on your hard disk
Maximum Capacity:	---	---	The maximum capacity of your hard disk
Multi-Sector Transfers:	<ul style="list-style-type: none"> ▪ Disabled ▪ 2 Sectors ▪ 4 Sectors ▪ 8 Sectors ▪ 16 Sectors 	[16 Sectors]	This option is automatically selected when Auto is selected.
LBA Mode Control:	<ul style="list-style-type: none"> ▪ Disabled ▪ Enabled 	[Enabled]	Indicates whether Logical Block Addressing is enabled or disabled. This option cannot be changed when Auto is selected.

Table 2: Fields, Options and Defaults for the Primary Master Submenu of the Main Menu

Menu Field	Options	Default	Description
Transfer Mode:	<ul style="list-style-type: none"> ▪ Standard ▪ Fast PIO 1 ▪ Fast PIO 2 ▪ Fast PIO 3 ▪ Fast PIO 4 ▪ FPIO 3 / DMA 1 ▪ FPIO 4 / DMA 2 	[Multiword DMA 2]	Indicates the method for moving data to/from the drive. This option cannot be changed when Auto is selected.
Ultra DMA Mode:	<ul style="list-style-type: none"> ▪ Disabled ▪ Mode 0 ▪ Mode 1 ▪ Mode 2 ▪ Mode 3 ▪ Mode 4 ▪ Mode 5 	[Disabled]	Selects the method for moving data to/from the drive. This option cannot be changed when Auto is selected. (Note that when the defaults are reset by pressing the [F9] button, [Disabled] is displayed, but it reverts to [Mode 5] after the system is rebooted).

Primary Slave Submenu of the Main Menu

The Primary Slave submenu allows you to configure secondary ATA devices.

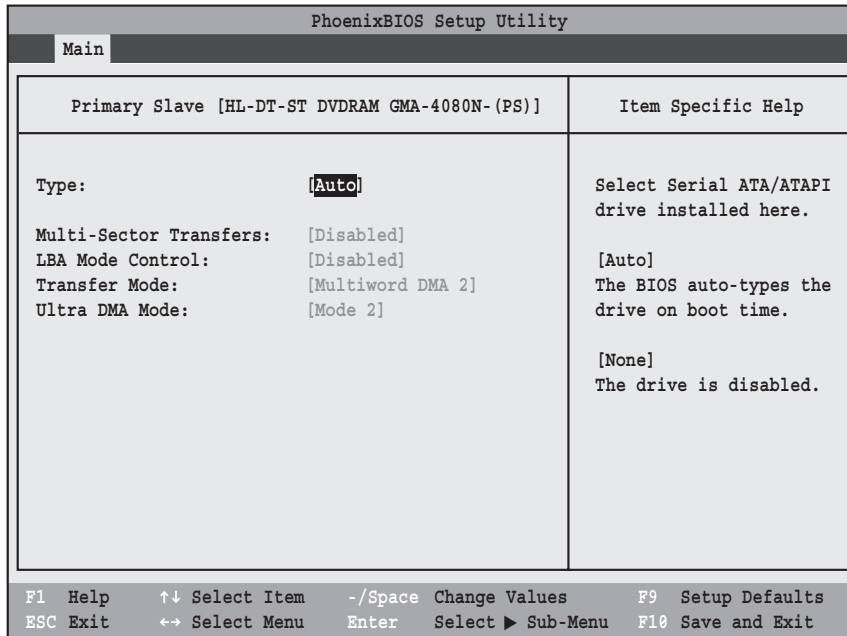


Figure 3. Primary Slave Submenu

Table 3: Fields, Options and Defaults for the Primary Slave Submenu of the Main Menu

Menu Field	Options	Default	Description
Type:	<ul style="list-style-type: none"> ▪ Auto ▪ None ▪ CD-ROM ▪ Hard Disk 	[Auto]	<p>NOTE: The Type field does not appear as a drop-down menu. Tap the spacebar to cycle through the selections.</p> <p>Selects the ATA/ATAPI device type. Select Auto to have the type automatically identified by the BIOS at POST. If None is selected, all of the following Set-up items do not appear. Select CD-ROM, SuperDisk or Hard Disk for appropriate drive type installed at this connection.</p>
CHS Format		Cylinders/Heads/Sectors	
Cylinders:	<ul style="list-style-type: none"> ▪ A number between 0 and 65,535 	—	This item appears only when Hard Disk is selected as the type. This field is changed by incrementing (pressing the [Spacebar]) or by typing in the number.
Heads:	<ul style="list-style-type: none"> ▪ A number between 1 and 16 	—	This item appears only when Hard Disk is selected as type. You can change the value by incrementing (pressing the [Spacebar]) or by typing in the number.
Sectors:	<ul style="list-style-type: none"> ▪ A number between 0 and 63 	—	This item appears only when Hard Disk is selected as type. You can change the value by incrementing (pressing the [Spacebar]) or by typing in the number.

Table 3: Fields, Options and Defaults for the Primary Slave Submenu of the Main Menu

Menu Field	Options	Default	Description
Maximum Capacity:	<ul style="list-style-type: none"> ▪ Display only 	—	Displays the maximum capacity of the drive calculated from the parameters of the hard disk when Auto is selected and the type is identified as hard disk, or User is selected.
Multi-Sector Transfers:	<ul style="list-style-type: none"> ▪ Disabled ▪ 2 Sectors ▪ 4 Sectors ▪ 8 Sectors ▪ 16 Sectors 	[Disabled]	This option cannot be changed when Auto is selected. Specify the number of sectors per block for multiple sector transfer.
LBA Mode Control:	<ul style="list-style-type: none"> ▪ Disabled ▪ Enabled 	[Disabled]	Enables or disables Logical Block Addressing in place of Cylinder, Head, Sector addressing. This option cannot be changed when Auto is selected.
Transfer Mode:	<ul style="list-style-type: none"> ▪ Standard ▪ Fast PIO 1 ▪ Fast PIO 2 ▪ Fast PIO 3 ▪ Fast PIO 4 ▪ Multiword DMA 1 ▪ Multiword DMA 2 	[Multiword DMA2]	Selects the method for moving data to/from the drive. Autotype the drive to select the optimum transfer mode. This option cannot be changed when Auto is selected. Multiword DMA is automatically set to mode 1 for Fast PIO 1, Fast PIO 2, Fast PIO 3, and set to mode 2 for Fast PIO 4 / DMA. (Note that when the defaults are reset by pressing the [F9] button, [Disabled is displayed, but it reverts to [Multiword DMA 2] after the system is rebooted).
Ultra DMA Mode:	<ul style="list-style-type: none"> ▪ Disabled ▪ Mode 0 ▪ Mode 1 ▪ Mode 2 ▪ Mode 3 ▪ Mode 4 ▪ Mode 5 	[Disabled]	Selects the method for moving data to/from the drive. Autotype the drive to select the optimum transfer mode. This option cannot be changed when Auto is selected. (Note that when the defaults are reset by pressing the [F9] button, [Disabled is displayed, but it reverts to [Mode 2] after the system is rebooted).
LBA Format		Logical Block Addressing (LBA)	
Total Sectors:	---	---	The total number of sectors on your hard disk
Maximum Capacity:	---	---	The maximum capacity of your hard disk

Serial ATA Port 0 Submenu of the Main Menu

The Serial ATA Port 0 submenu indicates whether serial ATA Port 0 devices are auto-typed at boot time.

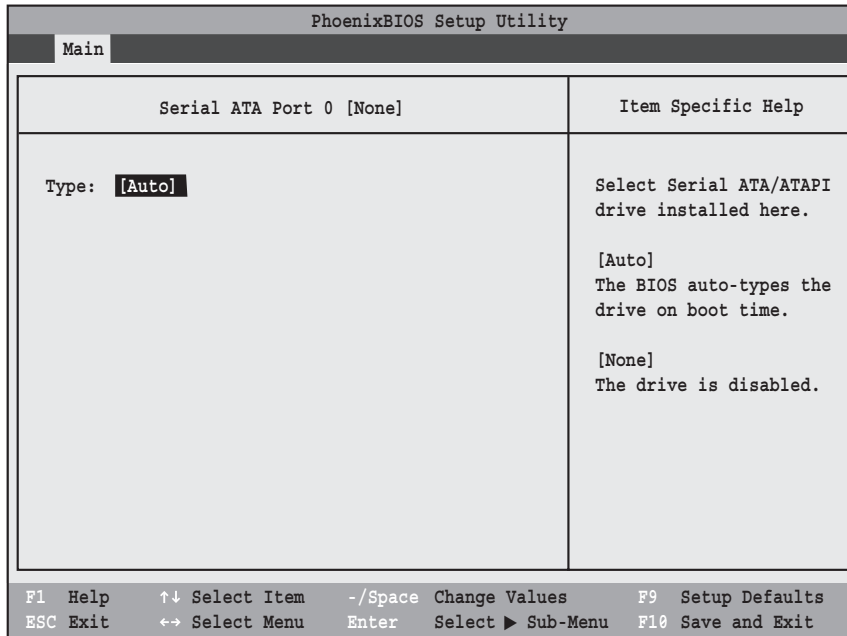


Figure 4. Serial ATA Port 0 Submenu

Table 4: Fields, Options and Defaults for the Serial ATA Port 0 Submenu of the Main Menu

Menu Field	Options	Default	Description
Type:	<ul style="list-style-type: none"> ▪ Auto ▪ None 	[Auto]	Automatically selects the ATA/ATAPI device type. When Auto is selected, the device type is automatically identified by the BIOS at POST. Select None if you don't want to select a device.

Exiting from Main Menu

When you have finished setting the parameters on this menu, you can either exit from the setup utility, or move to another menu. If you wish to exit from the setup utility, press the [Esc] key or use the cursor keys to go to the Exit menu. If you wish to move to another menu, use the cursor keys.

ADVANCED MENU – SETTING DEVICE FEATURE CONTROLS

The Advanced Menu allows you to:

- Set the keyboard and mouse features.
- Select between the display panel and an external CRT display or video projector.
- Enable or disable compensation for your display.
- Enables or disables the internal controllers.
- Configure CPU and USB features in your system.

Follow the instructions for Navigating Through the Setup Utility to make any changes.

(See *Navigating Through The Setup Utility* on page 2 for more information.)

The following tables show the names of the menu fields for the Advanced Menu and its submenus, all of the options for each field, the default settings and a description of the field’s function and any special information needed to help understand the field’s use.

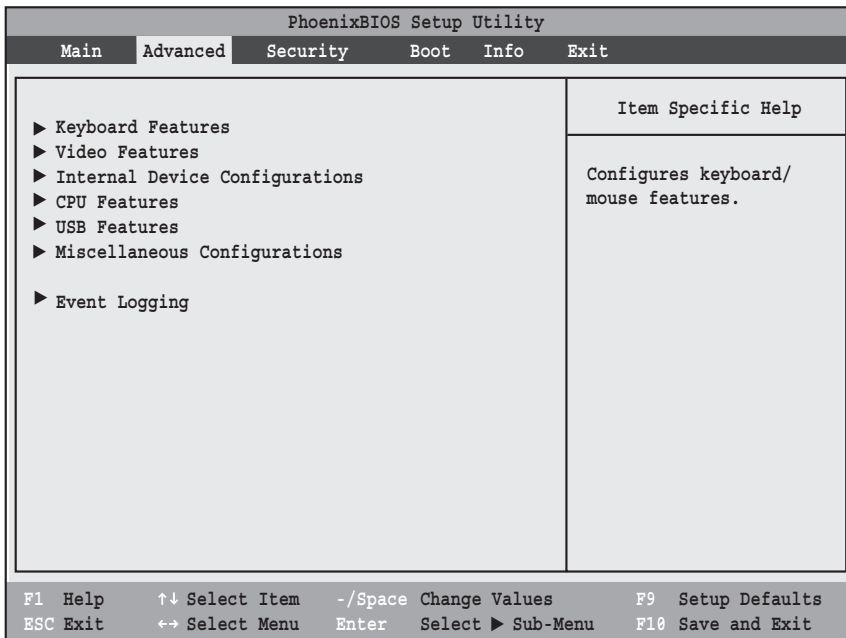


Figure 5. Advanced Menu

Table 5: Fields, Options and Defaults for the Advanced Menu

Menu Field	Description
Keyboard Features	When selected, opens the Keyboard Features submenu, which allows turning NumLock on and off.
Video Features	When selected, opens the Video Features submenu, which allows setting of the display parameters, including routing of video signals to different displays.
Internal Device Configurations	When selected, opens the Internal Device Configuration submenu, which allows enabling or disabling the Serial ATA, IDE, and LAN Controllers.
CPU Features	When selected, opens the CPU Features submenu to allow you to enable or disable the SpeedStep® Technology feature and XD Bit functionality.

Table 5: Fields, Options and Defaults for the Advanced Menu

Menu Field	Description
USB Features	When selected, opens the USB Features submenu to allow you to enable or disable the legacy support and SCSI SubClass support (e.g., floppy disk drive, external optical drive).
Miscellaneous Configurations	When selected, opens the Miscellaneous Configurations submenu to allow you to enable or disable the power button and the Wake Up On LAN or USB features, and to set the Volume Setting.
Event Logging	When selected, opens the event logging submenu.

Keyboard Features Submenu of the Advanced Menu

The Keyboard Features submenu is for enabling or disabling the NumLock feature.

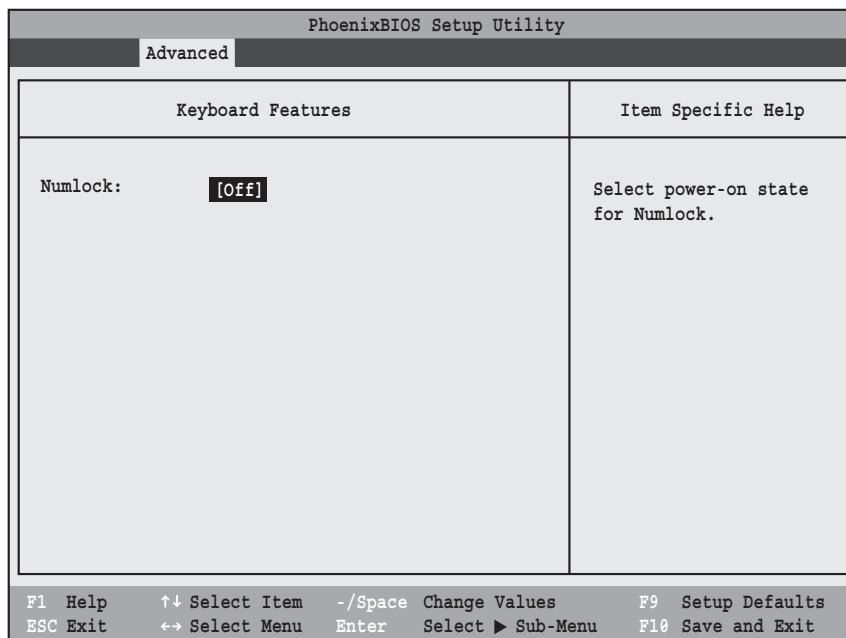


Figure 6. Keyboard Features Submenu

Table 6: Fields, Options and Defaults for the Keyboard Submenu of the Advanced Menu

Menu Field	Options	Default	Description
Numlock:	<ul style="list-style-type: none"> ▪ On ▪ Off 	[Off]	Sets the NumLock function state when the computer completes booting.

Video Features Submenu of the Advanced Menu

The Video Features Submenu is for setting the display parameters.

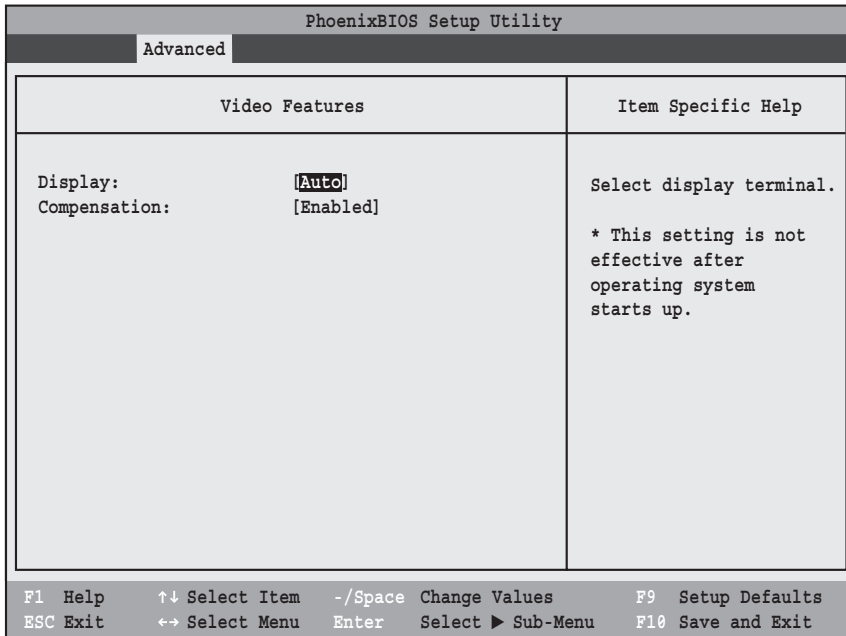


Figure 7. Video Features Submenu

Table 7: Fields, Options and Defaults for the Video Features Submenu of the Advanced Menu

Menu Field	Options	Default	Description
Display:	<ul style="list-style-type: none"> ▪ Internal Flat Panel ▪ External ▪ Auto 	[Auto]	Selects where the video signal will be routed. Note: The Windows video driver overrides this setting.
Compensation:	<ul style="list-style-type: none"> ▪ Disabled ▪ Enabled 	[Enabled]	Enables or disables compensation which controls spacing on the display. When enabled, displays with less than pixel resolution 1024 x 768 or 800 x 600 will still cover the entire screen. A resolution below 800 x 600 will fill the screen, but due to the low resolution, will appear blocky and may not be acceptable.

Internal Device Configurations Submenu of the Advanced Menu

The Internal Device Configuration submenu allows the user to configure other internal devices.

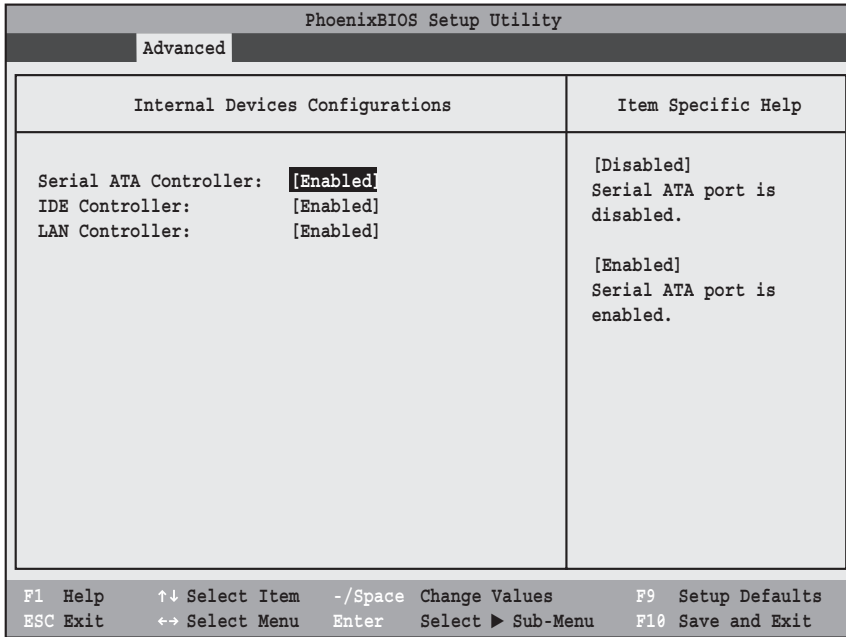


Figure 8. Internal Device Configuration Submenu

Table 8: Fields, Options and Defaults for the Internal Device Configuration Submenu of the Advanced Menu

Menu Field	Options	Default	Description
Serial ATA Controller:	<ul style="list-style-type: none"> ▪ Disabled ▪ Enabled 	[Enabled]	Enables or disables the Serial ATA port.
IDE Controller:	<ul style="list-style-type: none"> ▪ Disabled ▪ Enabled 	[Enabled]	Enables or disables selected IDE devices.
LAN Controller:	<ul style="list-style-type: none"> ▪ Disabled ▪ Enabled 	[Enabled]	Enables or disables the LAN controller.

CPU Features Submenu of the Advanced Menu

The CPU Features Submenu provides options for enabling or disabling the SpeedStep® Technology feature.

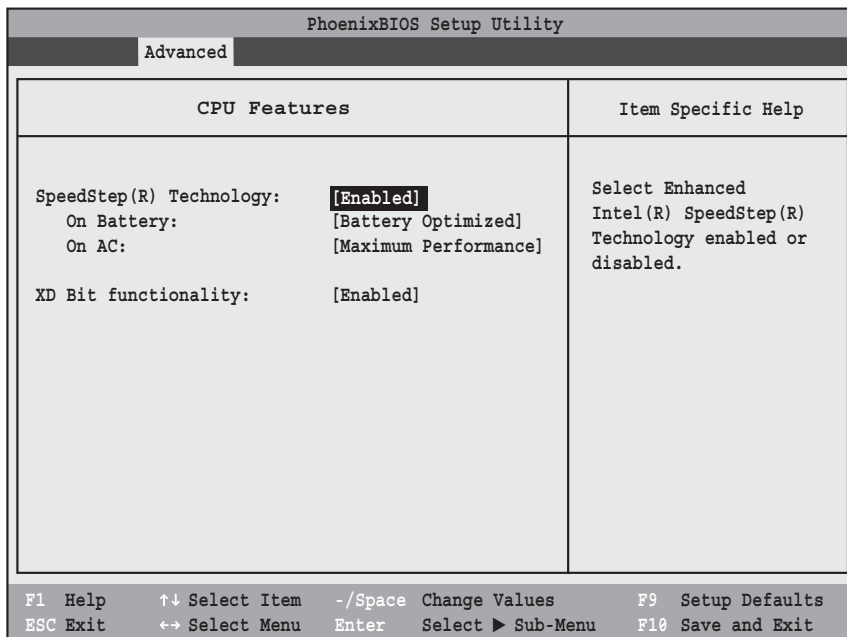


Figure 9. CPU Features Submenu

Table 9: Fields, Options and Defaults for the CPU Features Submenu of the Advanced Menu

Menu Field	Options	Default	Description
SpeedStep® Technology:	<ul style="list-style-type: none"> Disabled Enabled 	[Enabled]	When Enabled is selected, CPU speed and battery use can be selected from On Battery and On AC. When Disabled is selected, SpeedStep Technology is disabled.
On Battery:	<ul style="list-style-type: none"> Maximum Performance Battery Optimized Automatic 	[Battery Optimized]	When Maximum Performance is selected, CPU speed is maximized. When Battery Optimized is selected, CPU <i>power requirements</i> are optimized for battery operation. When Automatic is selected, the CPU speed is determined by the power source used.
On AC:	<ul style="list-style-type: none"> Maximum Performance Battery Optimized Automatic 	[Maximum Performance]	When Maximum Performance is selected, CPU speed is maximized. When Battery Optimized is selected, CPU <i>power requirements</i> are optimized for battery operation. When Automatic is selected, the CPU speed is determined by the power source used.

Table 9: Fields, Options and Defaults for the CPU Features Submenu of the Advanced Menu

Menu Field	Options	Default	Description
XD Bit functionality:	<ul style="list-style-type: none">▪ Disabled▪ Enabled	[Enabled]	Allows the user to enable and disable the Execute Disable Bit functionality. Execute Disable Bit allows the processor to classify areas in memory where application code can and cannot execute. In the event an internet worm attempts to insert code in the buffer, the processor disables code execution to prevent damage or worm propagation.

USB Features Submenu of the Advanced Menu

The USB Features Submenu provides options for enabling or disabling legacy USB support.

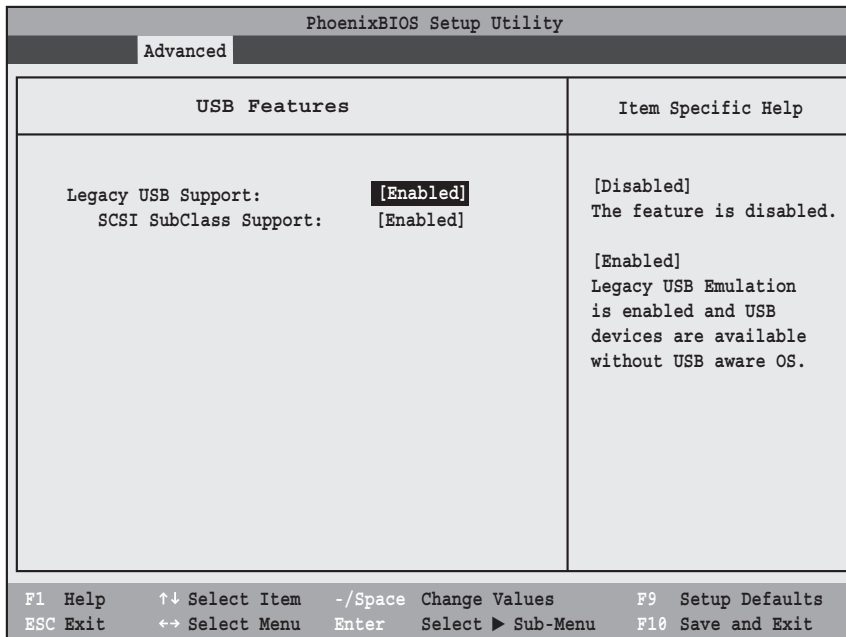


Figure 10. USB Features Submenu

Table 10: Fields, Options and Defaults for the USB Features Submenu of the Advanced Menu

Menu Field	Options	Default	Description
Legacy USB Support:	<ul style="list-style-type: none"> ▪ Disabled ▪ Enabled 	[Enabled]	When Enabled is selected, Legacy USB Emulation is enabled and the USB devices are available without a USB-aware OS. When Disabled is selected, Legacy USB support is disabled.
SCSI SubClass Support:	<ul style="list-style-type: none"> ▪ Disabled ▪ Enabled 	[Enabled]	When Enabled is selected, USB devices that belong to the SCSI subclass in the mass storage class (e.g., USB Memory Key) are enabled. Note that enabling this feature may cause the system to hang during POST, depending on the device that is connected.

Miscellaneous Configurations Submenu of the Advanced Menu

The Miscellaneous Configurations Submenu provides options for enabling or disabling the power button, the Wake Up On LAN feature, and the Wake Up On USB feature, and for enabling or disabling the system beep.

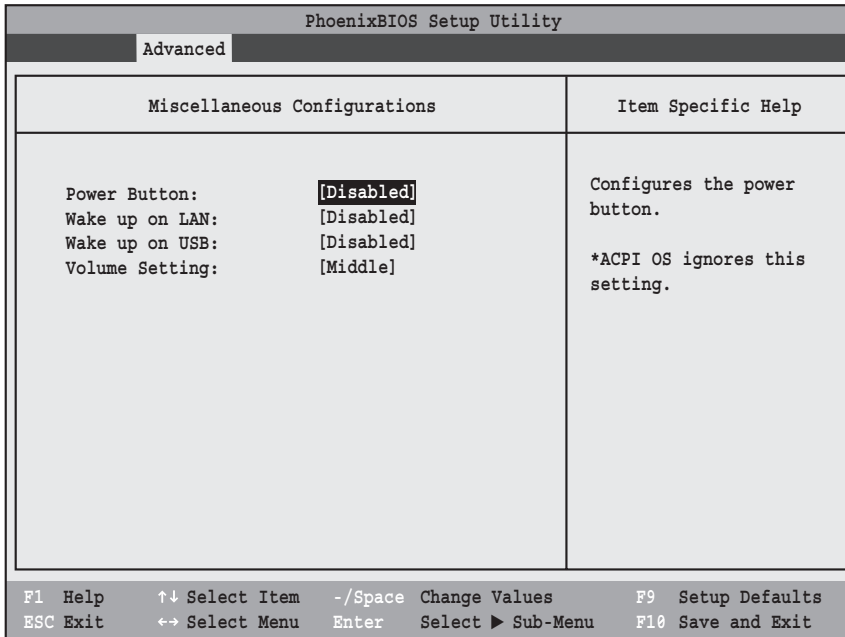


Figure 11. Miscellaneous Configurations Submenu

Table 11: Fields, Options and Defaults for the Miscellaneous Configurations Submenu of the Advanced Menu

Menu Field	Options	Default	Description
Power Button:	<ul style="list-style-type: none"> ▪ Disabled ▪ Power Off 	[Disabled]	Selecting Disabled disables the power button. Selecting Power Off allows you to turn off system power with the power button.
Wake up on LAN:	<ul style="list-style-type: none"> ▪ Disabled ▪ Enabled 	[Disabled]	Selecting Enabled allows the system to wake up when the internal LAN device receives a specific signal while in power-off state. Selecting Disabled disables this feature.
Wake up on USB:	<ul style="list-style-type: none"> ▪ Disabled ▪ Enabled 	[Disabled]	Selecting Enabled allows a USB device to wake up the system when it is in Standby mode. Selecting Disabled disables this feature.
Volume Setting:	<ul style="list-style-type: none"> ▪ Off ▪ Minimum ▪ Middle ▪ Maximum 	[Middle]	Allows you to set or disable the system volume level. Note that once the operating system initializes, the volume settings will be determined by the OS volume settings.

Event Logging Submenu of the Advanced Menu

The Event Logging Submenu configures event logging features for DMI events.

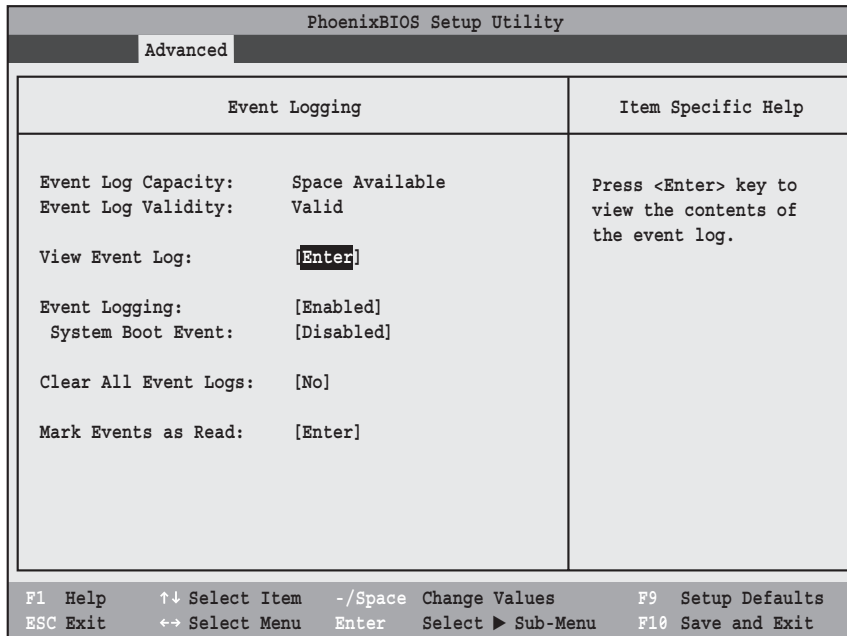


Figure 12. Event Logging Submenu

Table 12: Fields, Options and Defaults for the Event Logging Submenu of the Advanced Menu

Menu Field	Options	Default	Description
Event Log Capacity:		Space Available	Display only
Event Log Validity:		Valid	Display only
View Event Log:	<ul style="list-style-type: none"> ▪ Enter 	[Enter]	Allows you to view content of event log
Event Logging:	<ul style="list-style-type: none"> ▪ Disabled ▪ Enabled 	[Enabled]	Turns event logging on and off for all DMI events.
System Boot Event:	<ul style="list-style-type: none"> ▪ Disabled ▪ Enabled 	[Disabled]	Turns event logging on and off for DMI system boot events.
Clear All Event Logs:	<ul style="list-style-type: none"> ▪ No ▪ Yes 	[No]	When set to [Yes] all event logs will be cleared at next boot.
Mark Events as Read:	<ul style="list-style-type: none"> ▪ Enter 	[Enter]	Allows you to mark all events currently in the event log as having been read.

SECURITY MENU – SETTING THE SECURITY FEATURES

The Security menu allows you to set up the data security features of your notebook to fit your operating needs and to view the current security configuration. Follow the instructions for Navigating Through the Setup Utility to make any changes. (See *Navigating Through The Setup Utility* on page 2 for more information.)

The following tables show the names of the menu fields for the Security menu and its submenus, all of the options for each field, the default settings and a description of the field's function and any special information needed to help understand the field's use. The default condition is no passwords required and no write protection.



If you set a password, write it down and keep it in a safe place. If you forget the password you will have to contact your support representative to regain access to your secured functions and data.



- If you make an error when re-entering the password a [Warning] will be displayed on the screen. To try again press the Enter key and then retype the password. Press the Esc key to abort the password setting process.
- Entering a password incorrectly 3 times in a row will cause the keyboard and mouse to be locked out and the warning [System Disabled] to be displayed and a constant tone will be emitted. If this happens, restart the computer by turning off and on the power with the power switch and use the correct password on reboot.
- If the Power Management Security is Enabled and the Password on Boot is Disabled you will not have to type your password upon resuming the system from the Suspend or Save-to-Disk modes. Power Management Security will work only if Password boot is enabled.

PhoenixBIOS Setup Utility					
Main	Advanced	Security	Boot	Info	Exit
Supervisor Password Is:	Clear				
User Password Is:	Clear				
Set Supervisor Password	[Enter]				
Set User Password	[Enter]				
Minimum User Password Length:	[0]				
Password on Boot:	[Disabled]				
On Automatic Wake up:	[Disabled]				
KB Lock on Resume:	[Disabled]				
Boot from Removable Media:	[All]				
Flash Write:	[Enabled]				
▶ Hard Disk Security					
▶ Owner Information					
					Item Specific Help
					Press <Enter> key to set Supervisor Password to enable any password features.
					Then password entry is required to enter BIOS Setup.
F1 Help	↑↓ Select Item	-/Space Change Values	F9 Setup Defaults		
ESC Exit	↔ Select Menu	Enter Select ▶ Sub-Menu	F10 Save and Exit		

Figure 13. Security Menu

Table 13: Fields, Options and Defaults for the Security Menu

Menu Field	Options	Default	Description
Supervisor Password is:	—	Clear	A display-only field. Set is displayed when the system supervisor password is set and Clear when it is not.
User Password is:	—	Clear	A display-only field. Set is displayed when the general user password is set, and Clear when it is not.
Set Supervisor Password	—	[Enter]	Sets, changes or cancels the Supervisor Password. Supervisor's Password may be up to seven characters long and must include only letters or numbers (no symbols). Passwords are NOT case-sensitive. To cancel a password press the Enter key instead of entering characters in the Enter New Password field and in the Re-enter New Password field. When a Supervisor Password is set it must be used to access the BIOS setup utility.
Set User Password	—	[Enter]	This field can only be accessed if the Supervisor Password is set. Sets, changes or cancels the User Password. The User Password may be up to seven characters long and must include only letters or numbers (no symbols). Passwords are NOT case-sensitive. To cancel a password press the Enter key instead of entering characters in the Enter New Password field and in the Re-enter New Password field. When a User Password is set it must be used to access the BIOS setup utility.
Minimum User Password Length:	—	[0]	Supervisor can set password length (0 to 8) for user password. User cannot set a password shorter than the minimum length.
Password on Boot:	<ul style="list-style-type: none"> ■ Disabled ■ First Boot ■ Every Boot 	[Disabled]	When set to First Boot, a password (User or Supervisor) is required just once after the Power On Self Test (POST) before the operating system will be read from a disk. When set to Every Boot, a password (User or Supervisor) is required every time after the Power On Self Test (POST) before the operating system will be read from a disk. When set to Disabled no password is required.
On Automatic Wake up:	<ul style="list-style-type: none"> ■ Disabled ■ Enabled 	[Disabled]	When set to Disabled, it is not necessary to enter a password to wake up from LAN or Real Time Clock (RTC). When Enabled, it is still necessary to enter a password after automatic wake-up.
KB Lock on Resume:	<ul style="list-style-type: none"> ■ Disabled ■ Enabled 	[Disabled]	When set to Enabled, the PS/2 mouse and keyboard inputs are locked out upon Resume from Suspend or Save to Disk mode until you enter the password. When set to Disabled no password is required. If no Supervisor Password is set, this feature is not available and no password is required.
Boot from Removable Media:	<ul style="list-style-type: none"> ■ All ■ Supervisor only 	[All]	When All is selected, booting from removable media is not restricted. When Supervisor Only is selected, only the Supervisor (i.e., the user who enters Supervisor password), can boot from removable media.
Flash Write:	<ul style="list-style-type: none"> ■ Disabled ■ Enabled 	[Enabled]	When set to [Disabled], the BIOS Flash memory is write protected.
Hard Disk Security:	—	—	Configures hard disk security features
Owner Information:	—	—	Sets Owner information.

Exiting from the Security Menu

When you have finished setting the parameters on the Security Menu, you can either exit from setup utility or move to another menu. If you wish to exit from setup utility, press the Esc key to go to the Exit Menu. If you wish to move to another menu, use the cursor keys.

Hard Disk Security Submenu of the Security Menu

The Hard Disk Security Submenu is for configuring hard disk security features.

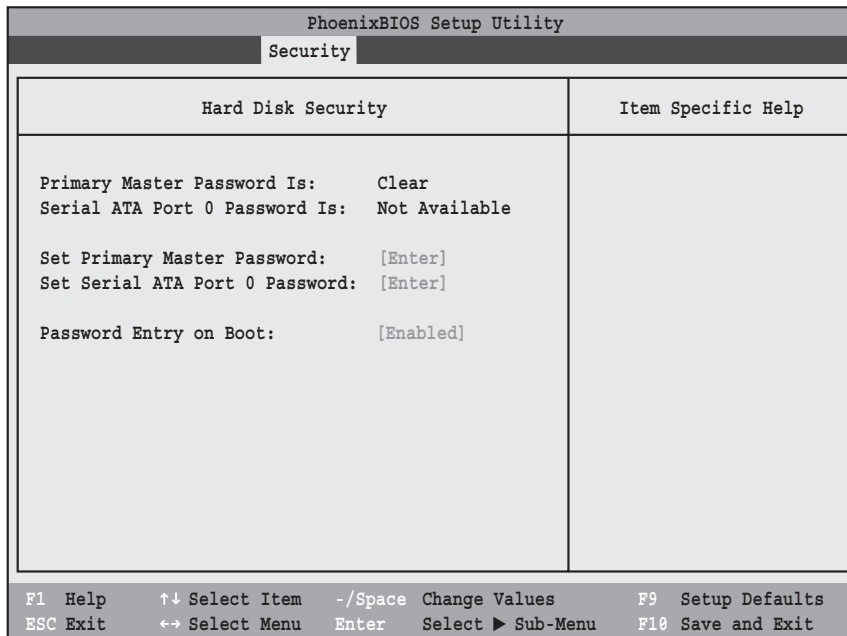


Figure 14. Hard Disk Security Submenu

Table 14: Fields, Options and Defaults for the Hard Disk Security Submenu of the Security Menu

Menu Field	Options	Default	Description
Primary Master Password Is:	---	Clear	The default is Clear. When the Master Password has been set in the field below, the field changes to Set.
Serial ATA Port 0 Password Is:	---	Not Available	A display-only field. Set is displayed when the Serial ATA Port 0 Password is set and Not Available when it is not.
Set Primary Master Password:	---	[Enter]	When the Supervisor Password has been set, the field can be changed. When enabled, the hard disk is locked with the password. Data in the locked disk cannot be read on any systems other than the original system on which it is locked or systems that have the identical password setting.
Set Serial ATA Port 0 Password	---	[Enter]	Sets, changes or cancels Serial ATA Port 0 Password. The password may be up to seven characters long and include only letters or numbers (no symbols). Passwords are NOT case-sensitive. To cancel a password press the Enter key instead of entering characters in the Enter New Password field and in the Re-enter New Password field. When a Serial ATA Port 0 Password is set it must be used to access the hard disk. Data on the hard disk cannot be read on other systems.
Password Entry on Boot:	<input type="checkbox"/> Disabled <input checked="" type="checkbox"/> Enabled	[Enabled]	When disabled, the master password entry is not required before booting the operating system, but the hard disk is still password-protected without password entry.

Owner Information Submenu of the Security Menu

The Owner Information Submenu is for setting owner information. Note that the owner information and foreground and background colors cannot be set without having entered a Supervisor password.

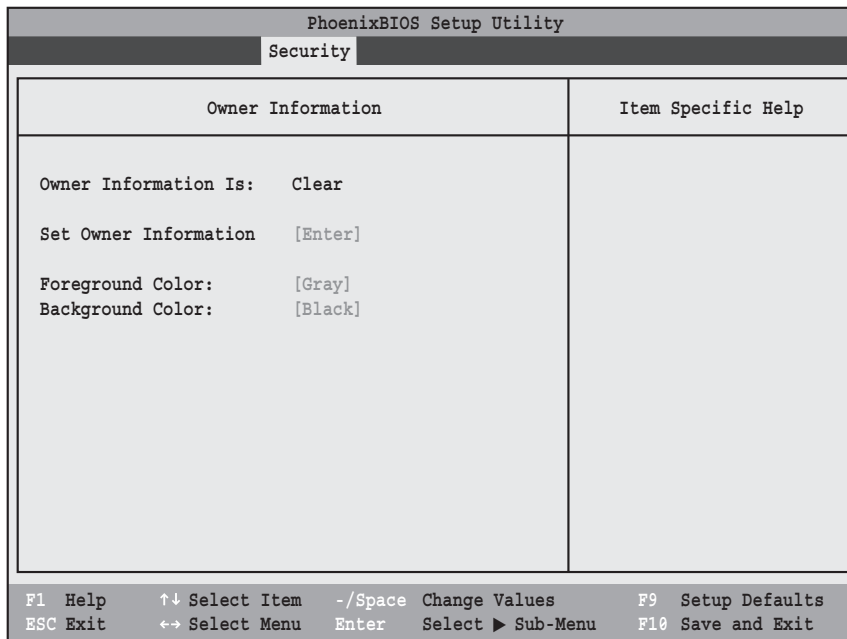


Figure 15. Owner Information Submenu

Table 15: Fields, Options and Defaults for the Owner Information Submenu of the Security Menu

Menu Field	Options	Default	Description
Owner Information Is:	—	Clear	Display only.
Set Owner Information:	—	[Enter]	Field to write owner information, (i.e., name).
Foreground Color:	<ul style="list-style-type: none"> ▪ Black ▪ Blue ▪ Green ▪ Cyan ▪ Red ▪ Magenta ▪ Brown ▪ White ▪ Gray ▪ Light Blue ▪ Light Green ▪ Light Cyan ▪ Light Red ▪ Light Magenta ▪ Yellow ▪ Bright White 	[Gray]	Set foreground color.
Background Color:	<ul style="list-style-type: none"> ▪ Black ▪ Blue ▪ Green ▪ Cyan ▪ Red ▪ Magenta ▪ Brown ▪ White ▪ Gray ▪ Light Blue ▪ Light Green ▪ Light Cyan ▪ Light Red ▪ Light Magenta ▪ Yellow ▪ Bright White 	[Black]	Set background color.

BOOT MENU – SELECTING THE OPERATING SYSTEM SOURCE

The Boot Menu is used to select the order in which the BIOS searches sources for the operating system. Follow the instructions for Navigating Through the Setup Utility to make any changes. (See *Navigating Through The Setup Utility* on page 2 for more information.)

The following tables show the names of the menu fields for the Boot menu and its submenu, all of the options for each field, the default settings and a description of the field's function and any special information needed to help understand the field's use.

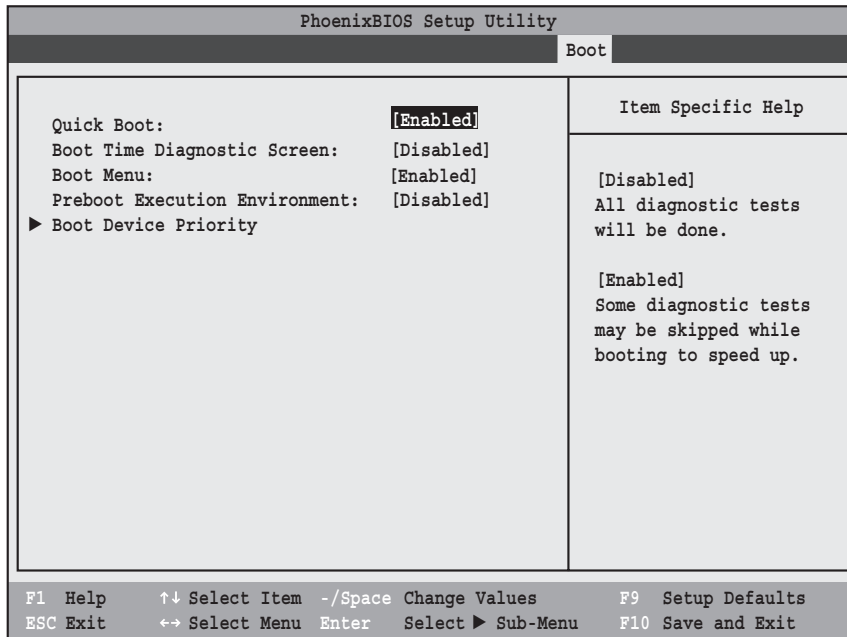


Figure 16. Boot Menu

Table 16: Fields, Options and Defaults for the Boot Menu

Menu Field	Options	Default	Description
QuickBoot:	<ul style="list-style-type: none"> ▪ Disabled ▪ Enabled 	[Enabled]	Turns on and off booting with a truncated set of Power On Self Test. (Fewer tests mean faster turn on.)
Boot-time Diagnostic Screen:	<ul style="list-style-type: none"> ▪ Disabled ▪ Enabled 	[Disabled]	Turns on and off display of test results instead of Fujitsu logo screen during Power On Self Test.
Boot Menu:	<ul style="list-style-type: none"> ▪ Disabled ▪ Enabled 	[Enabled]	This field is not active unless the Supervisor's Password has been set. When disabled, access to the Boot Menu with the [F12] key is disabled. When enabled, the Boot Menu is enabled and the [F12] key will allow you to display it.
Preboot Execution Environment:	<ul style="list-style-type: none"> ▪ Disabled ▪ Enabled 	[Disabled]	Turns on and off the preboot execution environment feature.
Boot Device Priority	—	—	This menu allows setting up the source for the operating system. See "The Boot Device Priority Submenu" in the following section.

Boot Device Priority Submenu of the Boot Menu

The Boot Device Priority Submenu is for setting the order of checking of sources for the operating system.

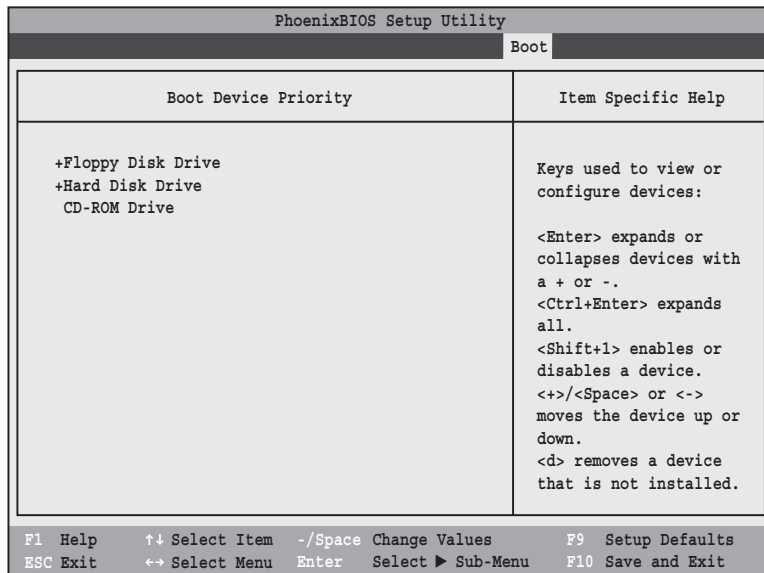


Figure 17. Boot Device Priority Submenu

- Be aware of the operating environment when booting from a CD-ROM/DVD-ROM or you may overwrite files by mistake.
- A bootable CD-ROM/DVD-ROM has either a floppy disk format or a hard drive format. When the bootable CD-ROM/DVD-ROM is used, the drive allocations change automatically without changing the BIOS setup. If a floppy disk format is used, the CD-ROM/DVD-ROM becomes Drive A. The CD-ROM/DVD-ROM will only take drive C: (hard drive format) if the internal hard drive is not present or is disabled. The bootable CD-ROM/DVD-ROM can never use a C: designation if a formatted internal hard drive is present since the C: designator is always reserved for the internal hard drive. The boot sequence ignores the new drive designations, however, your application software will use the new designations.
- **Booting from a Thumb (Flash) Drive:** To boot up the system using a thumb (flash) drive, perform the following steps (note that a third party utility is required in order to make the USB drive bootable):
 1. Insert the drive into a USB port and power up the system.
 2. When the Fujitsu logo appears, press the [F2] key.
 3. Go to the Boot tab and scroll down to Boot Device Priority and press the [Enter] key.
 4. Arrow down to Hard Disk Drive and press the [Enter] key.
 5. Arrow down to select the XXXMB Hard Drive (USB).
 6. Press the Space bar until the USB Hard Drive moves to the top of the list.
 7. Press the [F10] button, then click Yes to exit the setup utility.



Table 17: Fields, Options and Defaults for the Boot Device Priority Submenu of the Boot Menu

Menu Field	Description
+Floppy Disk Drive +Hard Disk Drive CD-ROM Drive	The boot selections determine the order in which the BIOS searches for the operating system during a startup sequence. To view all devices related to a source, press [Enter]; to view all devices related to all sources, press [Ctrl] + [Enter]. To change the order, highlight one source by using the [up] or [down] cursor keys and then press the [+] or [-] key to change the order number. [Shift] + [1] enables or disables a device. Tapping [d] removes from the list a device that is not installed. Be sure to save your changed order when you exit the BIOS setup utility. NOTE: Be aware that if you use the CD-ROM drive as the first boot device, certain files may be overwritten, depending upon your operating environment.

Exiting from Boot Menu

When you have finished setting the boot parameters with the Boot menu, you can either exit from the setup utility or move to another menu. If you wish to exit from the setup utility press the Esc key to go to the Exit menu. If you wish to move to another menu, use the cursor keys.

INFO MENU - DISPLAYS BASIC SYSTEM INFORMATION

The Info menu is a display only screens that provides the configuration information for your notebook.

The following table shows the names of the menu fields for the Info menu and the information displayed in those fields. These fields are for information purposes only, and cannot be modified by the user.



The information, including CPU type and speed, and total memory, displayed on this screen varies according to the unit you purchased.

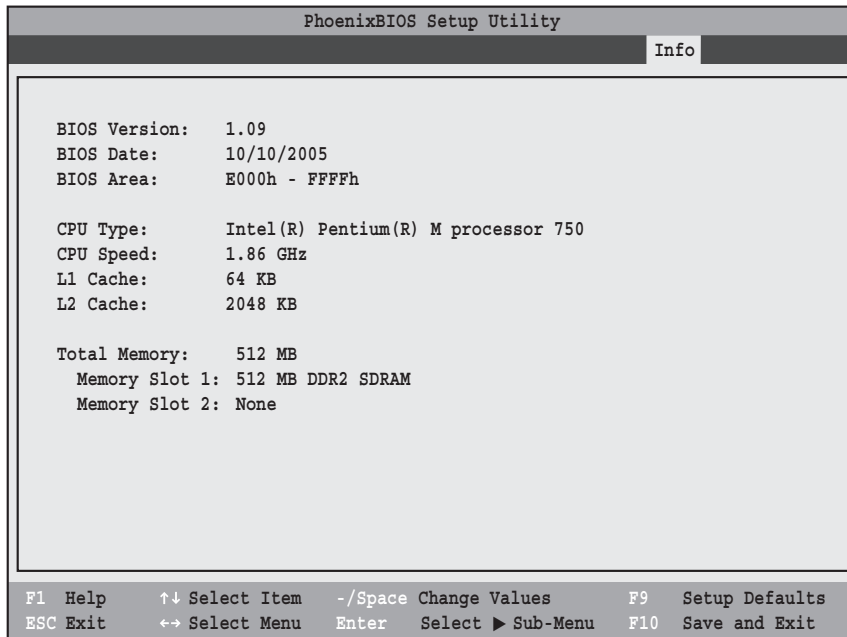


Figure 18. Info Menu

Table 18: Fields, Options and Defaults for the Info Menu

Note that the parameters listed in the following table may be different, depending upon the system configuration.

Menu Field	Default	Menu Field	Default
BIOS Version:	1.0X	L1 Cache:	64 KB
BIOS Date:	XX/XX/XXXX	L2 Cache:	2048 KB
BIOS Area:	E000h – FFFFh	Total Memory:	512 MB
CPU Type:	Intel(R) Pentium(R) M processor 750	Memory Slot 1:	512 MB DDR2 SDRAM
CPU Speed:	1.86 GHz	Memory Slot 2:	None

EXIT MENU – LEAVING THE SETUP UTILITY

The Exit Menu is used to leave the setup utility. Follow the instructions for Navigating Through the Setup Utility to make any changes. (See *Navigating Through The Setup Utility* on page 2 for more information.)

The following table shows the names of the menu fields for the Exit menu, the default settings and a description of the field's function and any special information needed to help understand the field's use.

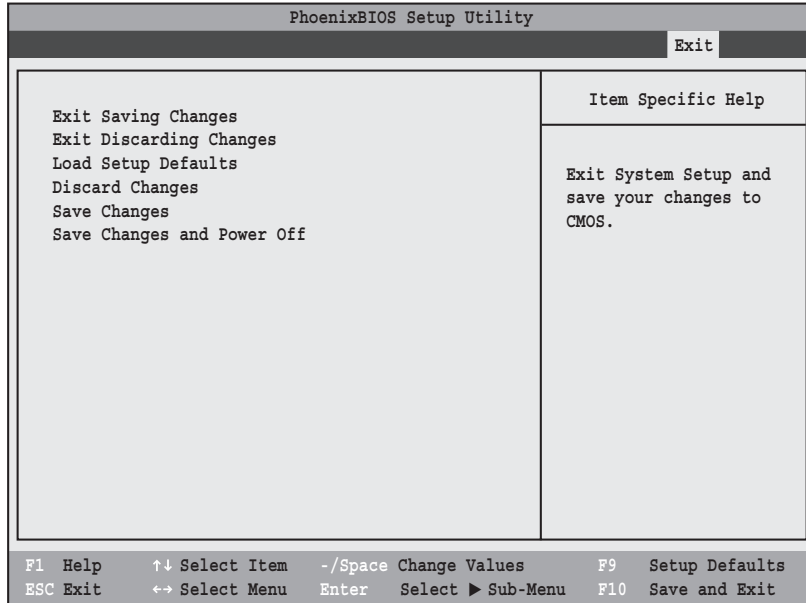


Figure 19. Exit Menu

Table 19: Fields, Options and Defaults for the Exit Menu

Menu Field	Description
Exit Saving Changes	Exit Saving Changes will store the entries on all setup utility menus to the BIOS memory and then exit the setup utility. A confirmation message <code>Save Configuration changes and exit now? [Yes] [No]</code> will be displayed.
Exit Discarding Changes	Selecting Exit Discarding Changes will exit the setup utility with out writing to the BIOS memory. When the BIOS recognizes this selection it will load the operating system and begin operation.
Load Setup Defaults	Selecting Load Setup Defaults will load the factory preset default values for all menu fields, then display the message <code>Load default configuration now? [Yes] [No]</code> . When confirmed the setup utility will return to the Exit Menu. To return to another menu follow the directions in the Navigating Through the Setup Utility Section.
Discard Changes	Selecting Discard Changes will load the previous values in BIOS memory for all menu fields. The message <code>Load previous now? [Yes] [No]</code> will be displayed. When confirmed the setup utility will return to the Exit menu. To return to another menu, follow the directions in the Navigating Through the Setup Utility Section.
Save Changes	Selecting Save Changes will cause the new settings in all menus to be written to the BIOS memory. The message <code>Save configuration changes now? [Yes] [No]</code> will be displayed. When confirmed, the setup utility will return to the Exit menu. To return to another menu, follow the directions in the Navigating Through the Setup Utility section.
Save Changes and Power Off	Selecting Save Changes and Power Off will cause the new settings in all menus to be written to the BIOS memory, after which the system will power itself off. The message <code>Save configuration changes and power off now? [Yes] [No]</code> will be displayed. When confirmed, the setup utility save the settings and the system will power off.